

Technology

This is the third full year of existence for the [Technology Department](#). The role of the department is to ensure a reliable and secure technology foundation so the town can provide its primary duties of public safety and public services.

Primary areas of focus are:

- Local Government Improvements
- eGovernment Initiatives
- Community Outreach

This past year the Technology Department spent a lot of resources to improve the infrastructure built over the last 3 years. Many system management processes were put in place. This enables the department to manage our existing complex environment, plan for future projects to further refine and grow our technology infrastructure, and offer excellent customer service. Blacksburg has a reputation as being a leader and innovator in local government technology and we intend to keep that distinction.

Local Government Improvements

The Technology Department works with all the town departments on a daily basis to accomplish the mission of reliable and secure information technology (IT) operations and to guide technology strategic planning. In addition the department serves as technical consultants for projects where technology is involved.

The department's priority is to offer exceptional customer service internally to the Town of Blacksburg local government staff and externally through our eGovernment initiatives and community outreach programs.

Most of the focus is internal support to town council, all departments, and staff.

Accomplishments for this past year:

- In partnership with the Finance Department, upgraded the Town's enterprise database system to a browser based interface
- In partnership with the Finance Department successfully rolled out an Internet Payment system for the towns water, sewer, and trash utility customers.
- Serve on the Technology Steering Committee for Montgomery County in an effort to improve information and data flow between the county and the Town of Blacksburg
- Assisted in the delivery of affordable broadband (high speed data communications) technology to the Blacksburg Industrial Park
- Greatly improved the management capability of the town wide-area-network (WAN)

- Continued expansion of the town intranet that serves the town staff
- Replaced seven computers at the Community Center Computer Lab. National Bank of Blacksburg donated an eighth computer. This makes all the computers in this lab facility one year older or less and offers current software for training purposes.
- Added a File Transfer (FTP) service so town staff can send and receive large data files
- Enhanced our Virtual Private Networking (VPN) capabilities so staff and stakeholders can access our information systems using broadband technologies
- Increased our wireless communications security with enhanced encryption technologies
- Added digital certificate technology from Verisign, Inc. to ensure secure Internet credit card transactions from our eGovernment Internet Portal
- Continue to upgrade and update staff computer systems to offer modern technology solutions for staff functions. This allows us to improve productivity and better serve the citizens of our community

E-Government

The Technology Department is actively involved in eGovernment. This is one a primary focus area for this department. In the eGovernment section below we detail this past year's activities and plans for the future.

- Town intranet portal
 - Expanded the Human Resource information, electronic forms, and expand information services
 - Added content for the Environmental Management System program the town is a participating in
 - Expanded the applications town staff use
 - Enhanced communication capabilities by making it easy for staff to post information for all to view
 - Automated help desk capabilities for staff to report problems for internal support services such as computers, telephones, building systems, etc.
- Continue to improve the towns web site – www.blacksburg.gov by making this easier to use and adding content that is useful to the citizens
- Added the Parks and Recreation Recreator brochure in a web based format
- Provided technology training to town staff
- Expanded participation in regional and state associations related to technology

Community Outreach

As a town we partner with many entities to improve the quality of life for the citizens of Blacksburg. The Technology Department is collaborating with many groups to improve life for us here. Listed below in the Community Outreach portion are detailed some of the projects we are involved in.

[Blacksburg Telecommunications Advisory Committee - BTAC](#)

Serve as staff to the Blacksburg Telecommunications Advisory Committee – BTAC. BTAC is an advisory body that makes recommendations to Town Council. This group monitors the telecommunications franchise agreements the town makes. In addition this group continuously looks to improve the technology environment of the town. BTAC meets once a month on the second Thursday of the month at 7:00. The location for the meeting is the first floor of the Municipal Building. Efforts of this committee can be viewed on the web site.

[Instrumented City](#)

This is a collaborative effort with [Virginia Tech Transportation Institute](#) – VTTI, [Virginia Department of Transportation](#) - VDOT, and the Town of Blacksburg. The goal of the project is to develop a prototype instrumented city in Blacksburg for collecting field data for use in traffic modeling and air emissions analysis and simulation.

This is a transportation study affecting the entire town of Blacksburg and was awarded to VTTI - by The National Science Foundation (NSF) and other sponsors. VTTI, VDOT, the Town of Blacksburg, and Manufacturers, along with the NSF are sponsoring this research with the goal of transforming Blacksburg into an instrumented city, making it the first instrumented city in North America and the second instrumented city in the world.

This research effort will provide state-of-the-art real-life and comprehensive data to be utilized for the development of highly demanded transportation modeling tools. An additional goal of this project is to use Blacksburg and the surrounding community as a test bed for testing emerging communication, traffic management, and traveler information systems.

These are the projects objectives:

- Serve as a real-life test facility for the evaluation and enhancement of traffic flow theory
- Develop a database of field data for conducting research on alternative means of disseminating real-time traveler information to the public
- Serve as a real-life test facility for enhancing and developing tools for the evaluation of network-wide energy and environmental impacts of operational-level transportation projects

- Serve as a real-life test facility for enhancing and developing tools for quantifying the noise impacts of operational-level transportation projects
- Serve as a test facility to evaluate emerging ITS technologies that can benefit transit operations
- Serve as a test bed for the evaluation of emerging surveillance and communication technologies
- Serve as a unique educational tool that will allow practitioners, undergraduate students, and graduate students to access and analyze real-life traffic data.

Driving down Main Street in Blacksburg citizens can see the results of the first phase of this project, in the inferred cameras on the traffic light arms.
(insert pic of traffic light camera).

The major benefit to the Town of Blacksburg is that these cameras will more effectively coordinate traffic flow on Main Street. These cameras detect vehicles with inferred technology, communicate to a master controller, and thus with each other - to improve the traffic flow.

[Blacksburg Electronic Village - BEV](#)

The Technology department continues the town's partnership with Blacksburg Electronic Village – BEV by meeting with the BEV staff regularly to develop ideas to improve the community. Some of the technology initiatives we have collaborated on are:

- Neighborhood web sites for the Neighborhood Enhancement Program. Three neighborhoods participated in a pilot program. Much was learned from this process and we hope to go live with these neighborhood web sites in FY 2004
- Video streaming of local government meetings. We currently offer this service on the town web site at www.blacksburg.gov/egov.php.
- Improve broadband availability for town residents. This is a continuing goal of BEV and the town technology staff. We are addressing this issue by communicating the necessity of affordable broadband to all citizens.

[BEV Seniors and Community Center Computer Lab](#)

Technology staff supports the Computer Center Lab located at the Community Center at 215 Patrick Henry Drive. This year we upgraded seven personal computers for the lab and connected the lab to the town's high-speed network. This gives high-speed Internet access to these computers. An eight new computer was donated making a total of eight new computers. This computer center now hosts instruction and free time for seniors, teens and Town of Blacksburg staff. Thanks to the foresight and hard work by the [BEV Seniors Group](#), this is a true community asset.